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## Archaeological Documentation at Kallison Square, San Antonio, Bexar County, Texas

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## Archaeological Documentation at Kallison Square, San Antonio, Bexar County, Texas

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# Archaeological Documentation at Kallison Square, San Antonio, Bexar County, Texas



by  
José Zapata

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Raymond Mauldin

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*Prepared by:*  
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Technical Report, No. 84



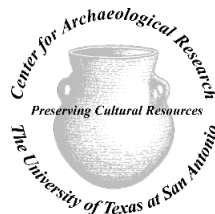
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Technical Report, No. 84

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## **Abstract:**

On June 4, 2019, the Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) conducted an archaeological assessment of four excavation pits located at the south side, or rear, of three historic buildings that are owned by GrayStreet Partners and are being rehabilitated. The buildings are part of a group of historic buildings located at the southwest corner of Dolorosa and S. Flores streets known as Kallison Square. Since it is a privately funded project on privately owned property, the project is not subject to regulatory review by the Texas Historical Commission (THC). The three properties, however, are located within the Main and Military Plaza Historic District; therefore, the project is subject to regulatory review by the City of San Antonio (COSA) Office of Historic Preservation (OHP) under the COSA Unified Development Code (Article 6 35-630 to 35-634). Dr. Paul Shawn Marceaux served as the Principal Investigator during the fieldwork portion of the project, and after Dr. Marceaux's departure from CAR, Dr. Raymond Mauldin served as the Principal Investigator for the final stages of the project. José Zapata served as the Project Archaeologist.

The purpose of the archaeological assessment was to determine if any cultural features and/or cultural material had been inadvertently compromised as a result of the mechanical excavations. During the assessment, CAR determined that a significant amount of disturbance was present. Undiagnostic glass, ferrous metal, and construction debris were observed within the exposed stratigraphy of several of the pits, but none of the material was collected. CAR staff determined that the area had been previously disturbed as a result of recurring building construction dating to at least 1877. The building rehabilitation project was, therefore, allowed to proceed. However, CAR recommends that any additional mechanical excavations planned by the property owner in this area be coordinated with COSA-OHP.

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# **Chapter 1: Introduction**

On June 4, 2019, the Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) conducted an archaeological assessment of four excavation pits located on the south side of three historical buildings owned by GrayStreet Partners. Known as Kallison Square, as Kallison's Western Wear once occupied some of the structures (Biediger 2018), the historic buildings located at 406, 408, and 414 Dolorosa Street date to the late nineteenth and early twentieth centuries. The properties are privately owned, and the project is privately funded. The mechanical excavations were not subject to regulatory review by the Texas Historical Commission (THC). The three properties, however, are located within the Main and Military Plaza Historic District; therefore, the project is subject to regulatory review by the City of San Antonio (COSA) Office of Historic Preservation (OHP) under the COSA Unified Development Code (Article 6 35-630 to 35-634). Dr. Paul Shawn Marceaux served as the Principal Investigator for the fieldwork, and after Dr. Marceaux's departure from CAR, Dr. Raymond Mauldin served as the Principal Investigator for the final stages of the project. José Zapata served as the Project Archaeologist.

## **Area of Potential Effect**

The Area of Potential Effect (APE) consists of the four excavation pits that were located at the rear of the three buildings scheduled for rehabilitation (Figure 1-1). The pits were excavated as an attempt to correct a water seepage problem. The purpose of the assessment was to determine if any cultural features and/or material had been inadvertently compromised as a result of the mechanical excavations. The mechanical excavations partially exposed the below-grade construction along the rear of all three buildings. During the assessment, CAR determined that a significant amount of disturbance was present. Undiagnostic glass, ferrous metal, and construction debris were observed within the exposed stratigraphy of several of the pits, but none of the material was collected. A review of multiple Sanborn Fire Insurance Maps indicated that the area had been previously disturbed by recurring building construction dating to at least 1877. This construction was especially pronounced between 1896 and 1904, when earlier stone structures were replaced by brick-constructed structures (Sanborn Map Company [Sanborn] 1896, 1904). Given the level of disturbance, the building rehabilitation project was allowed to proceed. However, CAR recommends that any additional mechanical excavations by the property owner in this area include an archaeological component.



Figure 1-1. Satellite image of the project area with the APE identified.



## **Chapter 2: Project Area Overview and Previous Archaeology**

This chapter provides a brief overview of the project area's environmental setting and a review of the history of the property. On this project, no new sites were defined, no prehistoric or proto-historic material was observed, and historic material was limited to construction debris that was out of context. Consequently, a detailed cultural history of San Antonio is not provided. However, useful reviews of the history of the area can be found in publications by Cox (1997; see also Cox 2005), de la Teja (1995), Hanson (2016), and McKenzie and colleagues (2016).

### **Environmental Setting**

San Antonio's climate is subtropical and humid with cool winters and hot summers (Taylor et al. 1991). Between 1981 and 2010, the average annual temperature in San Antonio was 69.5°F (28.3°C). The warmest months are typically July and August, while December and January are the coldest (Bomar 1999; Long 2020; Smith et al. 2015). The growing season commonly runs between 270 and 280 days a year (Bomar 1999; Petersen 2001).

Annual precipitation is around 78.7 cm (31 in.). Rainfall distribution tends to be bimodal, with one mode in May (10.72 cm; 4.22 in.) and the second commonly occurring in September (8.66 cm; 3.41 in.). December is the driest month, with an average of only 2.92 cm (1.51 in.) of precipitation (Bomar 1999:230). There is, however, considerable variability in the monthly patterns as well as from one year to the next (Bomar 1999). Smith and colleagues (2015) review instrument data for San Antonio between 1871 and 2012 that highlights the yearly variability. Three years during that period, 1973, 1919, and 1957, were extremely wet with over 124.5 cm (49 in.) of precipitation. The 1919 total of 127 cm (50 in.) was preceded, in 1917, by the lowest total on record when only 25.7 cm (10.11 in.) of precipitation was recorded. The 1957 rainfall total was preceded by the early 1950s drought, the driest period recorded during this 142-year record (Smith et al. 2015:5). Precipitation totals inferred from tree-ring data, which stretch back before AD 1700, show that similar patterns of year to year rainfall variability were common in the region over the last 300 years (see Cleaveland et al. 2011; Mauldin 2003). The pattern of extremes is likely due to the location of San Antonio at 29.5° north latitude and the city's proximity to the Gulf of Mexico. Wallen (1966) has shown that global circulation patterns frequently produce deserts at these latitudes by blocking or deflecting storms. Conversely, San Antonio is only 225 km (139.8 mi.) from the Gulf, and it is not uncommon for tropical storms and hurricanes to bring extreme rainfall events to the region, events that often result in devastating floods (see Ellsworth 1923).

The variability in rainfall is mitigated, to some degree, by the location of San Antonio at the base of the Edwards Plateau, a karst upland. Under the plateau is the Edwards Aquifer, a roughly 9,325 km<sup>2</sup> (ca. 3,600 mi.<sup>2</sup>) drainage area, that pools rainfall from across the region (Barker et al. 1994; San Antonio Water System 2020). Eventually, the water flows out into springs and rivers, many of which are in San Antonio. These include San Pedro Springs at the headwaters of San Pedro Creek and the spring-fed San Antonio River (see Eckhardt 2020; Smith et al. 2015; Woodruff and Abbott 1986).

Patterns of soils, vegetation, flora, and fauna are characterized for Texas by Blair's idea of biotic province (Blair 1950; see also Rappole et al. 1994). In that scheme, San Antonio sits near the border between the Balconian province to the north and the Tamaulipan province to the south. The Balconian, which includes the Edwards Plateau, is essentially the southern end of the Great Plains. The province is characterized by thin soils and high ecological diversity (see Amos and Gehlbach, eds. 1988; Kutac and Caran 1994). Along the southern end of the province is the Balcones escarpment, which is the result of faulting. The escarpment separates the Balcones from the Tamaulipan province. The Tamaulipan province includes the Gulf Coastal Plain. Though it likely supported a wider variety of plant and animal species prior to European ranching, the Tamaulipan province vegetation currently is dominated by mesquite, cactus, acacia, and various species of dry brush (Jahrsdoerfer and Leslie 1988). The faunal assemblage is a mix of species commonly found in desert, plains, and woodlands (see Presley 2003).

## **Property History**

The APE and associated buildings lie within the Main and Military Plazas Historic District (see Hanson 2016; McKenzie et. al 2016). This historic district features a collection of San Antonio's built environment, some of which date to the Spanish Colonial period (1718-1821; COSA 2020a). The historic Plaza de Armas (Military Plaza) is located directly across the street and north of the APE, and it is where San Antonio's City Hall was built in 1891 (Fisher 1996:118). Military Plaza was established in 1722 for use as a parade ground and market square by Spanish soldiers, and in 1731, Main Plaza was established as a market square for the settlers (COSA 2020a). A thorough summary of this area's natural setting and cultural history is presented in work by McKenzie and colleagues (2016:5-14).

Figure 2-1 shows the earliest plats of the southwest corner of Dolorosa and S. Flores streets, which date to the mid-to-late nineteenth century (COSA 2020b, 2020c). Among the owners of these lots are María Joséfa Travieso, María de Jesús Valdez, and M. Münch. However, there are no buildings shown on these early plats. A review of the deed records available online provided evidence that in 1858 María Joséfa Travieso deeded the property to her daughter, María de Jesús Valdez (Bexar County Deed Records 1858).



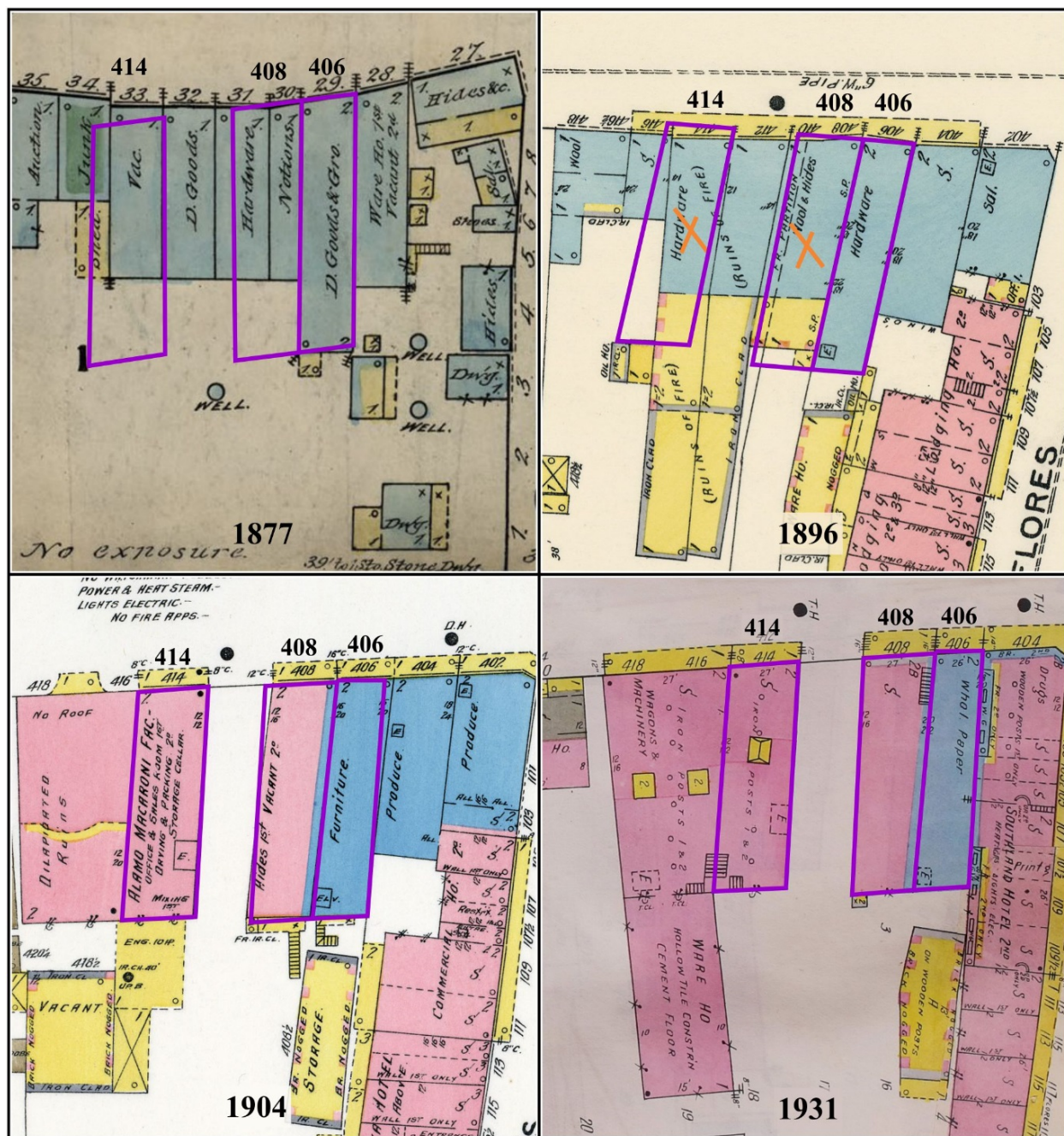


Figure 2-2. The 1877 (top left), 1896 (top right), 1904 (bottom left), and 1931 (bottom right) Sanborn maps showing building transformations (purple outlines) over the years. Note that the 1877 and 1896 stone buildings (blue) at 408 and 414 Dolorosa Street were replaced by brick buildings (pink) sometime before 1904. Sanborn color code: blue = stone, pink = brick, yellow = wood.





*Figure 2-3. Recent photo of the 400 block of Dolorosa Street (view to the southeast).*

### **Previous Archaeology**

These southwest corner lots have never been archaeologically studied, and this project presented the first opportunity to have, at the very least, a cursory look. While there are 22 archaeological sites recorded within the Main and Military Plaza Historic District, only four are within 100 m (328 ft.) of the APE (THC 2020; Figure 2-4). The four previously recorded sites (41BX337, 41BX1775, 41BX2088, and 41BX2248) are all from the historic period. Prehistoric artifacts, however, were recovered from site 41BX2088. These artifacts were determined to be secondary deposits and not evidence of a discrete prehistoric site (McKenzie et al. 2016:113).



Redacted Image

*Figure 2-4. Previously recorded sites within 100 m (328 ft.) of the APE (THC 2019).*

### **Site 41BX337 – San Pedro Acequia**

The San Pedro Acequia (irrigation canal) was constructed in 1718 and is approximately 6.4 km (4 mi.) long (Cox 2005:34-35). The *acequia* was first recorded in the 1970s (Schuetz 1970; see also Fox 1996). Several segments along its course have been uncovered since then, and recently, three more segments of this *acequia* were recorded (Figueroa 2019; Kemp et al. 2020; Ward 2019). When exposed, these irrigation canals reveal that they have, typically, been filled in with street and household refuse, much of which is temporally diagnostic. The San Pedro Acequia is part of a series of Spanish Colonial period San Antonio *acequias* that are listed as Historic Engineering Landmarks (American Society of Civil Engineers 2019).

The San Pedro Acequia is eligible for listing on the National Register of Historic Places (NRHP) as well as for designation as a State Antiquities Landmark (SAL; THC 2020).

### **Site 41BX1775 – Historic Period Foundations**

Site 41BX1775 consists of nine architectural features that were located as a result of shovel testing and backhoe trenching in a parking lot that was related to the Bexar County Justice Center Expansion Project (see Figueroa 2011). The features, which include brick and limestone wall sections as well as a plastered floor, likely represent remains of various structures that date to between 1885 and 1950. Figueroa (2011) did not recommend any additional work on these locations, and 41BX1775 was not recommended for designation as a SAL or as eligible for listing on the NRHP.

### **Site 41BX2088 – Plaza de Armas Buildings**

Site 41BX2088 is a multicomponent site that was located as a result of monitoring and testing associated with the architectural rehabilitation of the Vogel Belt Building Complex on the west side of the Military Plaza (Plaza de Armas). The complex is listed as a contributing component to the Main and Military Plaza Historic District, and the buildings are listed individually on the NRHP. The work reported by McKenzie and colleagues (2016) identified six features that represent prehistoric and historic period components. These features were located beneath a series of basements. The recovery of features was unexpected given the depth of the basements. It was recommended that any additional impacts greater than 2 m (6.5 ft.) at the rear of the buildings include archaeological testing (McKenzie et al. 2016).

### **Site 41BX2248 – Historic Period Foundation**

Site 41BX2248 was located as a result of archaeological monitoring of backhoe trenching on an open lot located east of San Pedro Creek and between Dolorosa and West Nueva streets (Matthews et al. 2018). The exposed limestone block foundation was found to be associated with a historic period building shown on the 1892, 1896, and 1904 Sanborn maps. The site was not recommended as eligible for listing on the NRHP nor was the site recommended for designation as a SAL. No additional archaeology was recommended for this site (Matthews et al. 2018).

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## **Chapter 3: Field and Curation Methods**

### **Field Methods**

Planning for this project began with a desktop review of the 400 block of Dolorosa Street. A series of 12 Sanborn Fire Insurance Maps, dating from between 1877 and 1931, were used to determine the extent of land modifications related to building construction. Of these, the 1877, 1896, 1912, and 1931 maps were selected for initial comparison to try and identify trends in the building construction. Based on these initial comparisons, the 1904 Sanborn map was subsequently used to develop a more detailed understanding of land modifications and previous construction.

The Project Archaeologist maintained field notes of the assessment, including descriptions of stratigraphy and observations of cultural material contained in each pit. The excavated soils were not inspected as these had been removed from the site prior to the arrival of CAR staff. The excavation pits and disturbed areas were photographed, and a photographic log was used to record relevant information, such as direction and profile observations. The dimensions of each pit were recorded; however, these are approximate due to the irregular size and shape of the pits. CAR staff did not observe any diagnostic artifacts, and no cultural material was collected.

### **Curation Methods**

Records obtained and/or generated during the project were prepared in accordance with federal regulation 36 CFR part 79 and THC requirements for State Held-in-Trust collections. All field notes, forms, photographs, and drawings were placed in labeled archival folders. Digital photographs were printed on acid-free paper and placed in archival-quality page protectors. All project related materials, including the final report, will be permanently stored at the CAR curation facility.

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## Chapter 4: Results of the Fieldwork

On June 4, 2019, CAR staff arrived on site and located four irregularly excavated pits at the rear of 406, 408, and 414 Dolorosa Street (Figure 4-1). The excavated soils had been removed from the site prior to the arrival of CAR staff. The depth of the excavation pits varied between 1.9 m and 3.0 m (6.2 ft. and 9.8 ft.). Excavation Pits 1, 2, and 3 were wide enough and sloped to allow safe access, while Excavation Pit 4 was too deep and access was prohibited (Figure 4-2). Extensive construction rubble was observed in the exposed stratigraphy of all pits, and it is likely the rubble was related to earlier construction episodes.

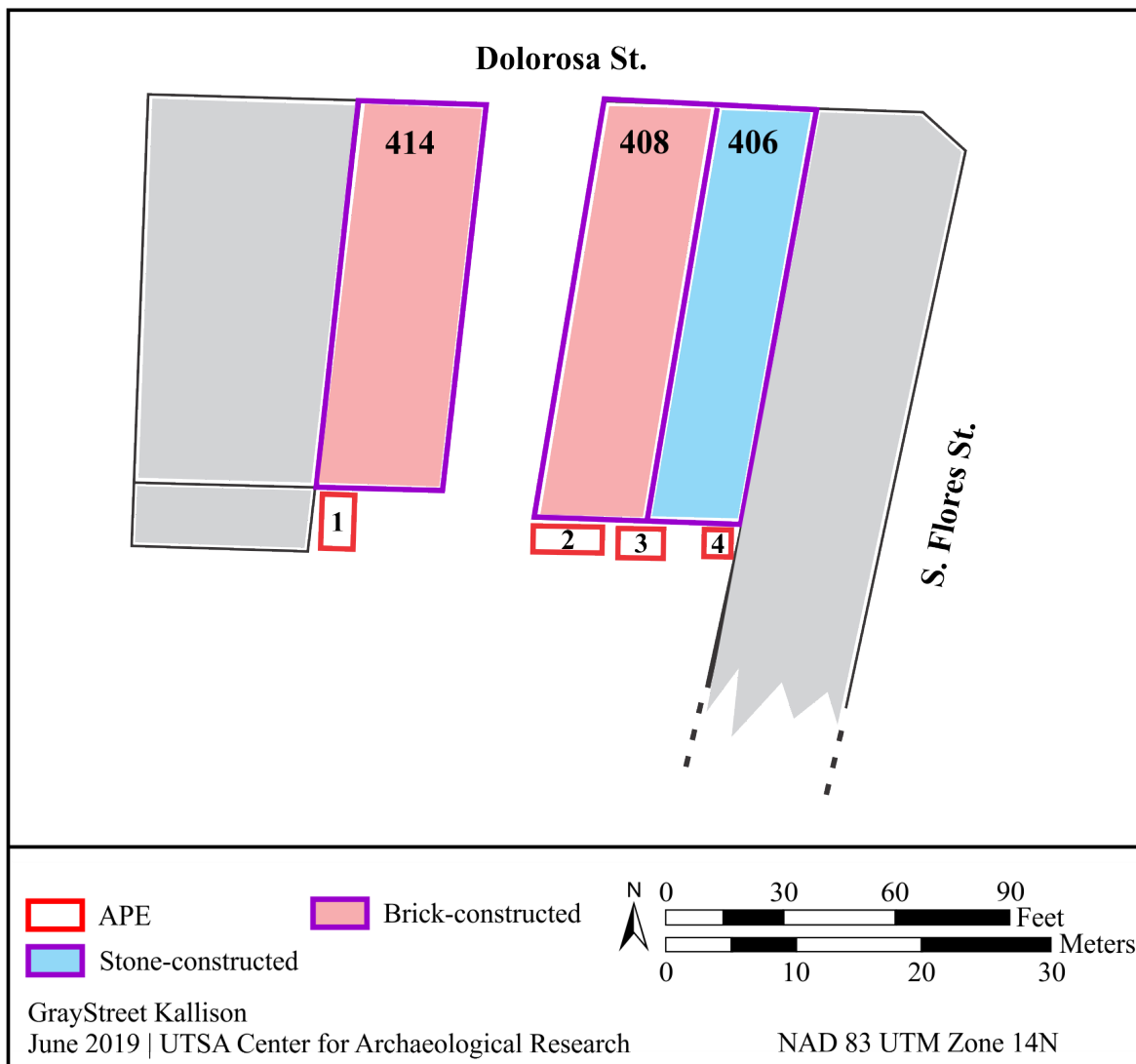


Figure 4-1. Plan view of the four excavation pits.



Figure 4-2. Excavation pits at rear of 414 (top), 408 (left), and 406 (right) Dolorosa Street.



## Excavation Pit 1

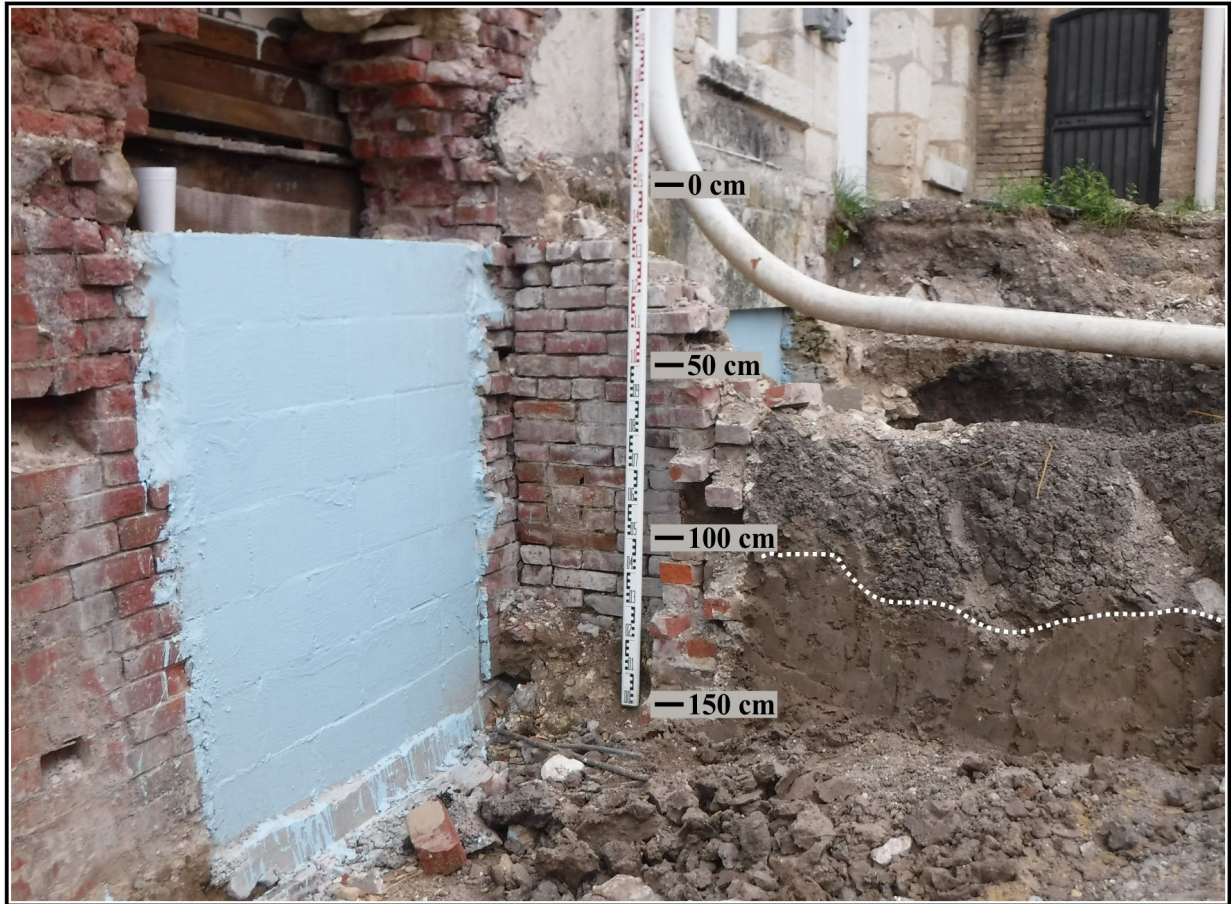
Excavation Pit 1 was located at the rear of 414 Dolorosa Street along the southwest corner of the building. The dimensions of the pit were irregular, but it was approximately 3.3 m (10.8 ft.) wide, 5.0 m (16.4 ft.) long, and 2.0 m (6.5 ft.) deep. CAR staff documented the west wall profile of a section of masonry wall exposed below-grade (Figure 4-3). This area was of interest due to a concentration of burnt material and ashy soils. Small fragments of charcoal and unidentifiable fragments of ferrous metal were observed. The area lacked a definite outline, and it was determined to likely be residual from a structural fire. The 1896 Sanborn map indicates that the building on this lot was in ruins due to a fire. No diagnostic artifacts were observed.



*Figure 4-3. West wall profile of Excavation Pit 1 at rear of 414 Dolorosa Street; note brick (construction fill) to the left of the outlined charcoal and ashy deposit.*

## Excavation Pit 2

Excavation Pit 2 was located at the rear of 408 Dolorosa Street along the west edge of the building and, although irregular, the pit was approximately 3.4 m (11.1 ft.) wide, 6.4 m (21 ft.) long, and 1.9 m (6.2 ft.) deep. CAR staff documented the east wall profile of the excavation pit (Figure 4-4). As seen in Figure 4-4, the light blue, cinder block wall is the recent repair. The exposed strata between 50 cm and 150 cm (19.7 in. and 59.1 in.) appear intact and generally undisturbed. No cultural material was observed on profile, and no diagnostic artifacts were observed in the rubble.



*Figure 4-4. East wall profile of Excavation Pit 2 at the rear of 408 Dolorosa Street; note strata between 50 cm and 150 cm are likely natural sediments.*

### **Excavation Pit 3**

Excavation Pit 3 abutted the rear of 406 Dolorosa Street toward the west edge of the building, although most of the excavation was at the rear of 408 Dolorosa Street. This pit was also irregular, but it was approximately 2.7 m (8.8 ft.) wide, 4.2 m (13.7 ft.) long, and 2.7 m (8.8 ft.) deep. CAR staff documented the east wall profile of the pit (Figure 4-5). The remnants of a limestone-constructed wall can be seen in Figure 4-5.





*Figure 4-5. East wall profile of Excavation Pit 3 at rear of 406-408 Dolorosa Street; note that the consistent clay strata between 50 and 150 cm are likely natural sediments.*



### Excavation Pit 4

Excavation Pit 4 was located at the rear of 406 Dolorosa Street (4-6). The pit was approximately 2.5 m (8.2 ft.) north-south by 2 m (6.6 ft.) east-west. Depth estimates were not made as entrance to the pit was not possible given safety concerns. CAR staff were limited to a visual assessment of the pit and its contents. A blocked-off doorway is noticeable in the below-grade exposure of the building's southern elevation.



*Figure 4-6. Excavation Pit 4 at rear 406 Dolorosa Street; note blocked-off doorway inside pit.*



## **Chapter 5: Summary and Recommendations**

On June 4, 2019, CAR staff conducted an archaeological assessment of four excavation pits located at the south, or rear, of three historic buildings that are owned by GrayStreet Partners and are being rehabilitated. The buildings are part of a group of historic buildings located at the southwest corner of Dolorosa and S. Flores streets. The excavation pits were located at the rear of the buildings at 406, 408, and 414 Dolorosa Street in order to correct water seepage problems. CAR assessed the excavation pits to determine if any cultural features and/or material had been inadvertently compromised as a result of the mechanical excavations. Since the project is located on privately owned property and is privately funded, the project is not subject to regulatory review by the THC, but it is subject to local regulatory review, as the buildings are historic and within the Main and Military Plaza Historic District.

CAR staff determined that the area had been previously disturbed by recurring building construction dating to at least 1877. This was especially pronounced between 1896 and 1904, when earlier stone structures were replaced by brick structures (Sanborn 1896, 1904). Based on the significant amount of disturbance and related construction debris in the excavated pits noted by CAR staff, it was determined to be unlikely that the mechanical excavation of the pits had damaged any earlier features. The building rehabilitation project was allowed to proceed. However, CAR recommends that any additional mechanical excavations planned by the property owner in this area be coordinated with COSA-OHP.

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## References Cited:

American Society of Civil Engineers

- 2019 Acequias of San Antonio. Landmarks. Electronic document, <https://www.asce.org/project/acequias-of-san-antonio/>, accessed June 7, 2019.

Amos, B.B., and F.R. Gehlbach (editors)

- 1988 *Edwards Plateau Vegetation: Plant Ecological Studies in Central Texas*. Baylor University Press, Waco, Texas.

Barker, R.A., P.W. Bush, and E.T. Baker, Jr.

- 1994 *Geologic History and Hydrogeologic Setting of the Edwards-Trinity Aquifer System, West-Central Texas*. Water Resources Investigations Report 94-4039. U.S. Geological Survey, Earth Science Center, Washington, D.C.

Bexar Appraisal District (BAD)

- 2020a Property Search. 408 Dolorosa Street, Improvements. Electronic document, [http://bexar.trueautomation.com/clientdb/Property.aspx?cid=110&prop\\_id=101284](http://bexar.trueautomation.com/clientdb/Property.aspx?cid=110&prop_id=101284), accessed May 18, 2020.

- 2020b Property Search. 414 Dolorosa Street, Improvements. Electronic document, <http://bexar.trueautomation.com/mapSearch/?cid=110&p=101286>, accessed May 18, 2020.

- 2020c Property Search. 406 Dolorosa Street, Improvements. Electronic document, [http://bexar.trueautomation.com/clientdb/Property.aspx?cid=110&prop\\_id=101282](http://bexar.trueautomation.com/clientdb/Property.aspx?cid=110&prop_id=101282), accessed May 18, 2020.

Bexar County Deed Records

- 1858 Deed. Grantor: M.J. Travieso. Grantee: M.J. Valdez. Vol. R1, p. 8. Deed Records. Bexar County Clerk. Electronic document, <https://bexar.tx.publicsearch.us/>, accessed June 6, 2019.

Biediger, S.

- 2018 Developer GrayStreet Purchases Kallison Square Property Near City Hall. Electronic document, <https://therivardreport.com/developer-graystreet-purchases-kallison-square-property-near-city-hall/>, accessed May 19, 2019.

Blair, W.F.

- 1950 The Biotic Provinces of Texas. *The Texas Journal of Science* 2(1):93-117.

Bomar, G.W.

- 1999 *Texas Weather*. 2nd ed. University of Texas Press, Austin.

City of San Antonio (COSA)

- 2020a Main and Military Plaza. Historic Districts. Office of Historic Preservation. Electronic document, <https://www.sanantonio.gov/historic/scoutsa/HistoricDistricts/MainMilitary>, accessed January 28, 2020.

- 2020b Subdivision. December 28, 1852. Civil Engineer, Survey Book 1, Page 159. Municipal Archives and Records. Electronic document, <https://www.sanantonio.gov/Municipal-Archives-Records/Search-Collections>, accessed May 19, 2020.
- 2020c Plat of Dolorosa Street and South Flores Street. August 6, 1875. Plat Book 2, Page 42. Civil Engineers Maps: 1847-1929. Municipal Archives and Records. Electronic document, <https://www.sanantonio.gov/Municipal-Archives-Records/Search-Collections>, accessed May 19, 2020.
- Cleaveland, M.K., T.H. Votteler, D.K. Stahle, R.C. Casteel, and J.L. Banner  
 2011 Extended Chronology of Drought in South Central, Southeastern and West Texas. *Texas Water Journal* 2(1):54-96.
- Cox, I.W.  
 1997 The Growth of San Antonio. In *Archaeology at the Alamodome: Investigations of a San Antonio Neighborhood in Transition. Volume I, Historical, Architectural, and Oral History Research*, edited by A.A. Fox, M. Renner, and R.J. Hard, pp. 8-44. Archaeological Survey Report, No. 236. Center for Archaeological Research, The University of Texas at San Antonio.
- 2005 *The Spanish Acequias of San Antonio*. Maverick Publishing Company, San Antonio.
- de la Teja, J.F.  
 1995 *San Antonio de Bexar: A Community on New Spain's Northern Frontier*. University of New Mexico Press, Albuquerque.
- Eckhardt, G.  
 2020 The Edwards Aquifer Website. Electronic document, <http://www.edwardsaquifer.net/spspring.html>, accessed May 2020.
- Ellsworth, C.E.  
 1923 *The Floods in Central Texas in September, 1921*. U.S. Geological Survey, Water-Supply Paper 488. Government Printing Office, Washington, D.C.
- Figueroa, A.L.  
 2011 *Archaeological Investigations and Construction Monitoring at the Bexar County Justice Center Expansion Project, San Antonio, Bexar County, Texas*. Archaeological Report, No. 392. Center for Archaeological Research, The University of Texas at San Antonio.
- 2019 Archaeological Monitoring for the Weston Urban Open Space Park, San Antonio, Bexar County, Texas. Draft on file, Center for Archaeological Research, The University of Texas at San Antonio.
- Fisher, L.F.  
 1996 *Saving San Antonio*. Texas Tech University Press, Lubbock.
- Fox, A.A.  
 1996 *Archaeological Investigations of Portions of the San Pedro and Alazan Acequias in San Antonio, Texas*. Archaeological Report, No. 49. Center for Archaeological Research, The University of Texas at San Antonio.

- Hanson, C.  
2016 *Archaeological Investigations for the Main Plaza Redevelopment Project, San Antonio, Bexar County, Texas*. Atkins, Austin.
- Jahrsdoerfer, S.E., and D.M. Leslie  
1988 *Tamaulipan Brushland of the Lower Rio Grande Valley of South Texas: Description, Human Impacts, and Management Options*. U.S. Fish and Wildlife Service, Biological Report 88(36). Southwest Regional Office, Albuquerque.
- Kemp, L., J.E. Zapata, C.M.M. McKenzie, M. Pfeiffer, and R. Curilla  
2020 *Archaeological Monitoring of the Downtown Street Reconstruction Project at North Main Avenue and Soledad Street and the State Antiquities Landmark Testing of 41BX2164 and 41BX2170, San Antonio, Bexar County, Texas*. Archaeological Report, No. 462. Center for Archaeological Research, The University of Texas at San Antonio.
- Kutac, E.A., and S.C. Caran  
1994 *Birds and Other Wildlife of South Central Texas*. University of Texas Press, Austin.
- Long, C.  
2020 Bexar County. Handbook of Texas Online. Texas State Historical Association. Electronic document, <https://tshaonline.org/handbook/online/articles/hcb07>, accessed February 9, 2020.
- Matthews, C., S.A. Tomka, and R.D. Ward  
2018 *Archaeological Monitoring of Utility Installations Between Dolorosa and Nueva Streets Immediately East of Military Plaza, San Antonio, Bexar County, Texas*. Raba Kistner Environmental Consultants, San Antonio.
- Mauldin, R.P.  
2003 *Exploring Drought in the San Antonio Area Between 1700 and 1979*. Special Report, No. 29. Center for Archaeological Research, The University of Texas at San Antonio.
- McKenzie, C., L. Martinez, and R. Mauldin  
2016 *Archaeological Monitoring and Test Excavations at the 1722 Presidio San Antonio de Béxar (Plaza de Armas Buildings), San Antonio, Bexar County, Texas*. Archaeological Report, No. 445. Center for Archaeological Research, The University of Texas at San Antonio.
- Petersen, J.F.  
2001 San Antonio: An Environmental Crossroads on the Texas Spring Line. In *On the Border: An Environmental History of San Antonio*, edited by C. Miller, pp.17-41. University of Pittsburgh Press, Pennsylvania.
- Presley, A.L.  
2003 Antiquity and Paleoenvironment of the Tamaulipan Biotic Province of Southern Texas: The Zooarchaeological Perspective. Master's thesis, Texas A&M University.
- Rappole, J.H., T. Fulbright, J. Norwine, and R. Bingham  
1994 The Forest-Grassland Boundary in Texas: Population Differentiation without Geographic Isolation. In *Proceedings of the Third International Rangelands Congress*, edited by P. Singh, pp. 167-177. Range Management Society of India, Jhansi.

San Antonio Water System

- 2020 About the Edwards Aquifer. Electronic document, <https://www.saws.org/your-water/new-water-sources/current-water-supply-projects/edwards-aquifer/about-the-edwards-aquifer/>, accessed May 20, 2020.

Sanborn Map Company (Sanborn)

- 1877 Fire Insurance Map, San Antonio, Texas. Sheet 1. Electronic document, [http://legacy.lib.utexas.edu/maps/sanborn/s-u/txu-sanborn-san\\_antonio-1877-1.jpg](http://legacy.lib.utexas.edu/maps/sanborn/s-u/txu-sanborn-san_antonio-1877-1.jpg), accessed May 21, 2020.
- 1896 Fire Insurance Map, San Antonio, Texas. Sheet 9. Electronic document, [http://legacy.lib.utexas.edu/maps/sanborn/s-u/txu-sanborn-san\\_antonio-1896-09.jpg](http://legacy.lib.utexas.edu/maps/sanborn/s-u/txu-sanborn-san_antonio-1896-09.jpg), accessed May 21, 2020.
- 1904 Fire Insurance Map, San Antonio, Texas. Sheet 6. Electronic document, [http://legacy.lib.utexas.edu/maps/sanborn/s-u/txu-sanborn-san\\_antonio-1904-vol1-06.jpg](http://legacy.lib.utexas.edu/maps/sanborn/s-u/txu-sanborn-san_antonio-1904-vol1-06.jpg), accessed May 21, 2020.
- 1912 Fire Insurance Map, San Antonio, Texas. Vol. 4, Sheet 343. Electronic document, [http://legacy.lib.utexas.edu/maps/sanborn/s-u/txu-sanborn-san\\_antonio-1912-vol4-343s.jpg](http://legacy.lib.utexas.edu/maps/sanborn/s-u/txu-sanborn-san_antonio-1912-vol4-343s.jpg), accessed May 21, 2020.
- 1931 Fire Insurance Map, San Antonio, Texas. Vol. 4, Sheet 343. On file, Center for Archaeological Research, The University of Texas at San Antonio.

Schuetz, M.K.

- 1970 *Excavations of a Section of the Acequia Madre in Bexar County, Texas and Archeological Investigations of Mission San José in April 1968*. Archeological Report 19. Texas Historical Survey Committee, Austin.

Smith, S., C. Munoz, and R. Mauldin

- 2015 Project Setting. In *Archaeological Investigations within San Pedro Springs Park (41BX19), San Antonio, Bexar County, Texas*, by R. Mauldin, S. Smith, S. Wigley, A. Figueroa, and C. McKenzie, pp. 5-12. Archaeological Report, No. 443. Center for Archaeological Research, The University of Texas at San Antonio.

Taylor, F.B., R.B. Hailey, and D.L. Richmond

- 1991 *Soil Survey, Bexar County, Texas*. Soil Conservation Service, U.S. Department of Agriculture and the Texas Agricultural Experimental Station.

Texas Historical Commission (THC)

- 2020 Texas Historic Sites Atlas. Electronic document, <https://atlas.thc.state.tx.us/>, accessed May 16, 2020.

Wallen, C.C.

- 1966 Arid Zone Meteorology. In *Arid Lands*, edited by E.S. Hill, pp. 31-51. Methuen, London.

Ward, R.

- 2019 *Cultural Resources Investigations for the CPS Energy 401 Dwyer Avenue Overhead to Underground Service Conversion Project, San Antonio, Bexar County, Texas*. Cultural Resources Report, No. 18-022. Raba Kistner Environmental Consultants, San Antonio.

Woodruff, C.M., and P.L. Abbott

- 1986 Stream Piracy and Evolution of the Edwards Aquifer Along the Balcones Escarpment, Central Texas. In *The Balcones Escarpment*, edited by P.L. Abbott and C.M. Woodruff, pp. 77-90. Geological Society of America, San Antonio.